Value Stream Mapping: The First Step in Lean Manufacturing Simulation

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ABSTRACT

Lean manufacturing is the systematic approach to identifying and eliminating waste (non-value-added activities) through continuous improvement by flowing the product at the pull of the customer in pursuit of perfection. There are a number of tools for implementing lean. Two of these tools value stream mapping (VSM) and simulation. VSM is a method of visually mapping a product's production path (including materials and information) from door-to-door. Value stream mapping can serve as a starting point to help management, engineers, suppliers and customers recognize waste and identify it causes. The results of value stream mapping are a future state, which can serve as the foundation for other lean improvement strategies.

This paper discusses:

- Value stream mapping for developing a current state of the manufacturing process
- The future state in the VSM that identifies areas for improvement
- The use of simulation in the continuous improvement process
- Constructing simulation models from the VSM current and future states
- Several case studies of using VSM on the manufacturing floor
- Lessons learned from VSM and simulation

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